

BRIEF DESCRIPTION OF THE DRAWINGS

Fig's. 1a-¹d are schematic illustrations of several different design patterns of MTJ cells formed of segmented chains in accord with the present invention.

Fig's. 2a and ²b show, respectively a prior art elliptical cell of aspect ratio 2 and the replacement of said cell in the present invention by two circular elements of identical radii

Fig's. 3a and ³b are schematic cross-sectional illustrations of two MTJ configurations suitable for use in a discrete cell element of the present invention. The MTJ configuration has an antiferromagnetically coupled fixed layer formed in accord with the method of this invention.

Fig. 4 is a schematic illustration of a two-segment multi-segmented cell at the intersection of two conductive lines.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment of the present invention teaches a method of forming an MRAM cell array of novel segmented MTJ devices of approximately sub-micron dimensions, said array thereby having a structure and design that provides a lowered threshold for state switching and a uniformity of coercivity across the array. The design